

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Magnum Shielding

New York Manufacturing Extension Partnership

New Brazing Process for Magnum Shielding's Harley Davidson Brake Lines

Client Profile:

Magnum Shielding, located in Pittsford, New York, was founded in 1982. Magnum specializes in designing and manufacturing assemblies for the motorcycle aftermarket. They have a niche market with Harley-Davidson in high end braided control cables, brake line kits, oil/fuel lines and ignition sets. The Pittsford facility employs 25 people.

Situation:

Magnum Shielding was provided an opportunity to manufacture a new, exclusive line of hydraulic brake and clutch line kits for both the Parts & Accessories and the Custom Vehicle Operation divisions of Harley-Davidson. These highly polished parts needed to be brazed without affecting the high gloss finish. Production capacity, cost competitiveness, inventories, and quality were also issues that needed to be addressed. High Tech Rochester (HTR), a NIST MEP network affiliate and division of the New York Manufacturing Extension Partnership, enjoyed an on-going relationship with Magnum Shielding as a result of an earlier successful productivity improvement project.

Solution:

HTR was working with a local high technology client, Induction Atmospheres, LLC, on an energy reduction project funded by the New York State Energy Research and Development Authority (NYSERDA). When Magnum Shielding described their opportunity to HTR's Project Manager, he was able to match their need with Induction Atmosphere's capability and NYSERDA's funding program. HTR helped Magnum apply for a NYSERDA grant based on the projected energy savings of Induction Atmosphere's small lot brazing process versus alternative production methods. This grant covered the development of a process, fixturing and related equipment. HTR continued its involvement as manager of the project as well as helping Magnum install LEAN work processes including 5S, Standard Work and Work Instructions. The cooperative effort involving HTR, two manufacturers and a state agency enabled Magnum Shielding to develop a cost effective, high quality local induction brazing capability instead of sending parts to a conventional furnace in Cleveland. The process was personally inspected and approved by Harley Davidson engineers.

Results:

- * Partnership effective in developing unique fixturing, low electrical energy usage, quick turnaround (minimum transportation and minimum inventory) and superior quality.
- * Significant advances in overall production capabilities and quality levels, due to investments in equipment and training.
- * Substantial additional business from Harley-Davidson scheduled for the 2006 and 2007 production models.

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- * Expanding market to include brake line kits for more H-D models as well as several other new products, some of which will require brazing.
- * Sales estimated to almost double from 2003, when the project started, to 2005.
- * Hired 20 employees in last 12 months.

Testimonial:

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